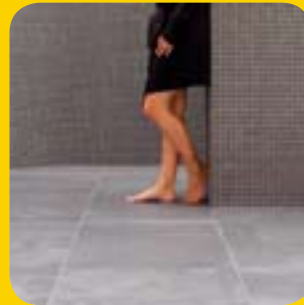
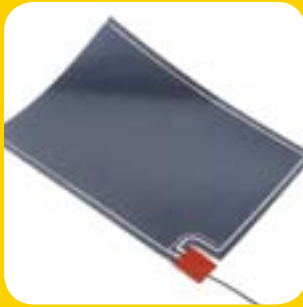


MAGNUM[®]

keeps you warm



Catalogue

magnumheating.com



MAGNUM[®] Mat

Electrical floor heating mat

Floor heating offers the most comfortable form of heating. Evenly distributed heat is radiated across the entire floor. The floor will reach an extremely pleasant temperature, and the general ambient temperature in the room will be very comfortable. Enjoy a totally pleasant environment.

MAGNUM Mat is a unique floor heating mat. It can be installed directly on top of an existing tile floor, or directly on concrete bases or thermal boards. The heating cable on the glassfibre mat is about 4 mm thick, and can be installed directly in the flexible tile adhesive or self-leveling compound. The mat is placed directly under the surface. The response time for heating the floor is relatively quick.

This makes the system suitable for areas that are not occupied the entire day, such as bathrooms, hobby rooms, recreational areas etc. The intelligent thermostatic control is able to calculate the time

required to reach the set temperature, so you will have the right temperature at the desired time.

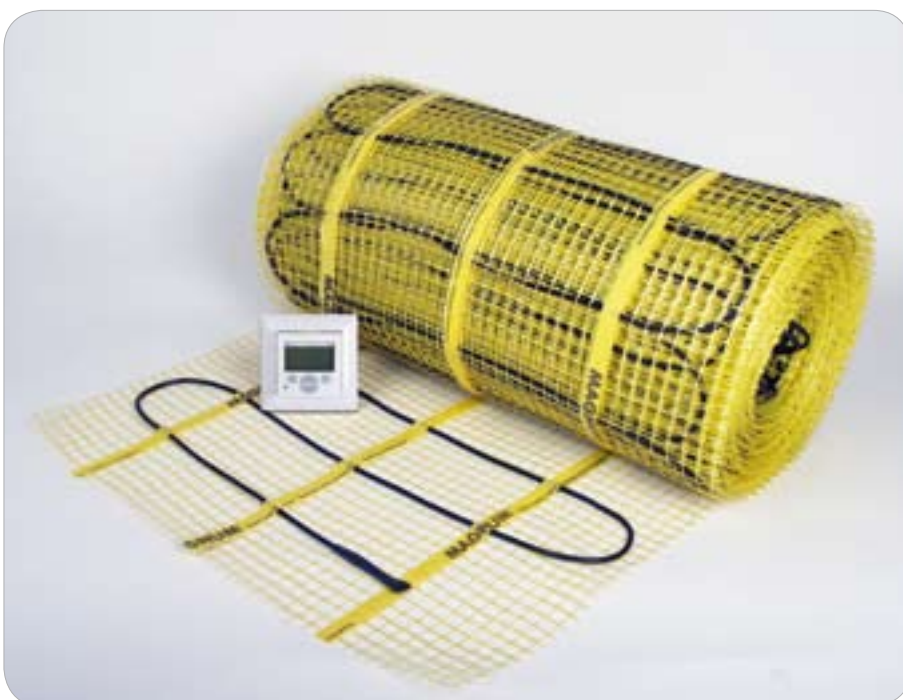
MAGNUM Mat electrical floor heating has more advantages in comparison to more conventional water based floor-heating systems:

- Very easy to install
- No water: no risk of leaks!
- To be installed directly into tile adhesive or self-levelling compound
- Suitable as primary* or asecondary heating source
- Every room has its own thermostat
- Extremely efficient and energy-friendly
- Easy to use
- Low purchase and consumption costs
- Maintenance free

* Primary heating is not possible in every situations and depends on several areal factors. Ask free for specific information at our division of calculation.



**Lifetime guarantee for
MAGNUM Mat.**
[Click here for conditions.](#)



Applications

- Floor tiles on top of old floor tiles
- Under tiles on existing concrete or timber floor covered with thermal boards
- Suitable for wall and floor

Sectors

- Utility builds
- Renovations
- Office spaces
- Stores
- Recreation

MAGNUM[®] Mat

Technical information

MAGNUM Mat is delivered as a complete set

- Heating mat
- Flexible piping for floor sensor
- Installation instructions
- Check/control card
- Full color Box

Technical information

- EMC-free twin conductor cable with 2.5 meter 3-core power cable, adjusted to glassfibre mat.
- Aluminum sheath covers the cable totally.
- Chrome/Nickel resistance cable.
- Teflon insulation
- PVC protective coat
- 10-11 watt per meter resistance cable, 230 Volt.
- Tested at 4000 volt
- Cable diameter approx. 4 mm.
- Width of mat 50 cm.
- VDE approved (reg nr. 84015)
- This product meets the current NEN norms for installation in a completely wet room.

MAGNUM Mat is available on surfaces from 0.75 up to 25 m². There is a one-sided conductor connected at the end, the heating wire is invisibly connected with a unique splice connection - there is no need for a return to the thermostat.

The MAGNUM Mat can be installed in several ways:

- Directly into flexible tile adhesive
- In self-levelling compound

Lifetime warranty

MAGNUM Mat is a maintenance free floor heating system with a lifetime warranty for the electro technical working of the heating mat and two years for the thermostat and floor sensor. Read the conditions and or register at magnumheating.com.

Additional heating

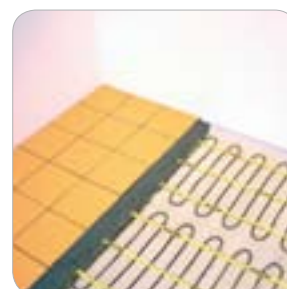
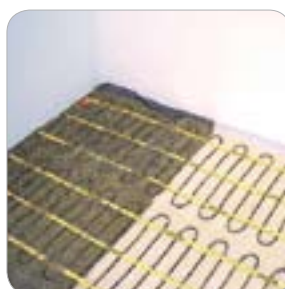
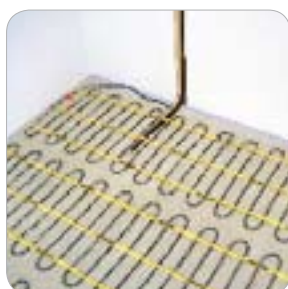
The MAGNUM Mat can be installed in virtually any situation as supplementary heating. The mat gives the floor a very comfortable temperature.

Primary heating

Primary heating is not possible in all situations and depends on several factors. In certain cases the MAGNUM Mat can be installed as primary heating. Ask for more specific information from our design service

Free online floor planner

For the MAGNUM Mat it is possible to make use of our free online planner. After filling in the relevant information such as the space to be heated, the position of doors, position of furniture the programme will calculate exactly how much floor heating is necessary. This will give you an indicative cost immediately and you can automatically order the correct size of mat. You can also print out the floor plan for installation.



Article #.	m ²	Power	Amps	Ohm	Voltage	Measurements
MAGNUM Mat Small 25 cm wide, 150W/m² Sticky						
240075	0.75 m ²	113 Watt	0,6	468	230 V	0,25 x 3,00 m
240125	1.25 m ²	188 Watt	0,8	281	230 V	0,25 x 5,00 m
240175	1.75 m ²	263 Watt	1,1	201	230 V	0,25 x 7,00 m
240225	2.25 m ²	338 Watt	1,5	157	230 V	0,25 x 9,00 m
MAGNUM Mat Regular 50 cm wide, 150W/m²						
240201	1,0 m ²	150 Watt	0,7	353	230 V	0,50 x 2,00 m
240301	1,5 m ²	225 Watt	1,0	235	230 V	0,50 x 3,00 m
240401	2,0 m ²	300 Watt	1,3	176	230 V	0,50 x 4,00 m
240501	2,5 m ²	375 Watt	1,6	141	230 V	0,50 x 5,00 m
240601	3,0 m ²	450 Watt	2,0	117	230 V	0,50 x 6,00 m
240701	3,5 m ²	525 Watt	2,3	100	230 V	0,50 x 7,00 m
240801	4,0 m ²	600 Watt	2,6	88	230 V	0,50 x 8,00 m
240901	4,5 m ²	675 Watt	2,9	78	230 V	0,50 x 9,00 m
241001	5,0 m ²	750 Watt	3,3	71	230 V	0,50 x 10,00 m
241201	6,0 m ²	900 Watt	3,9	59	230 V	0,50 x 12,00 m
241401	7,0 m ²	1050 Watt	4,6	50	230 V	0,50 x 14,00 m
241601	8,0 m ²	1200 Watt	5,2	44	230 V	0,50 x 16,00 m
241801	9,0 m ²	1350 Watt	5,9	39	230 V	0,50 x 18,00 m
242001	10,0 m ²	1500 Watt	6,5	35	230 V	0,50 x 20,00 m
MAGNUM Mat Large 50 cm wide, 125W/m²						
202421	12,0 m ²	1500 Watt	6,5	35	230 V	0,50 x 24,00 m
203021	15,0 m ²	1875 Watt	8,2	28	230 V	0,50 x 30,00 m
* the resistance value can differ ± 10%.						
WARNING: 0.75 to 10m ² has a capacity of 150 Watt/m ² and 12 to 25m ² a capacity 125 Watt/m ²						

Optional availability:





MAGNUM[®] Cable

Electrical Floor heating cable for new build in sand cement screed.

Floor heating offers the most comfortable form of heating. Evenly distributed heat is radiated across the entire floor. The floor will reach an extremely pleasant temperature, and the general ambient temperature in the room will be very comfortable. Cold feet will become a thing of the past in a draught free environment.

The intelligent thermostatic control automatically ascertains the time required to reach your desired comfort temperature, so your floor will always be at the right temperature at the required time. Underfloor heating allows you to get rid of radiators and free up wall space to maximize your interior layout.

MAGNUM Cable electrical Floor heating cable offers even more than conventional water based under floor heating systems or even other electrical systems:

- Simple installation
- No water: so no risk of leaks

- No cutting work necessary
- Directly underneath pourable cement screed
- Primary or supplementary heating.
- Each room can be thermostatically controlled with its own thermostat.
- Energy efficiency guidance.
- Easy to use.
- Low purchase cost.
- Low consumption cost.
- 100% maintenance free.

*A heat loss calculation should be done to ascertain the amount of cable required for individual circumstances and needs. It is essential to use insulation in the substrate to attain a successful and energy efficient installation. Call our no obligation design service for further information.



**Lifetime guarantee on
MAGNUM Cable Cable!
Click for conditions.**



Applications

- Living rooms
- Bathrooms
- Kitchens
- Conservatories
- Foyers
- Office spaces
- Canteens
- Showrooms
- etc.

Sectors

- Industrial and Utility construction
- Renovations
- Distribution centres
- Hospitals
- Offices
- Stores
- Recreation

MAGNUM[®] Cable

Technical information

MAGNUM Cable is offered as a complete set.

- Heating cable
- Flexible conduit pipe for the floor sensor
- installation and user manual
- Full Color Box

Technical information MAGNUM Cable

- EMC-free 2-conductor cable
- Full containment by aluminum mantle
- Chrome/Nickel resistance wire
- XLPE insulation
- PVC protecting coat
- 17 Watt per meter capacity, 230 volt
- cable thickness: 7mm
- Produced and controlled to IEC 800 standards
- VDE approved
- CE standards within Europe
- ISO 9001 qualified

The cables are available in total capacities from 300 up to 3300 watt, enough for spaces between 2 and 30 square meters. The cable is a twin conductor with a unique splice connection which means it only needs to be connected at one end - there is no need for a return to the thermostat.

The MAGNUM Cable can be fixed to the substrate in several ways:

- Aluminum Tape on MAGNUM Isorol
 - Aluminum tape on dovetail sheets
 - Tie-wraps on reinforcement grid mesh
 - MAGNUM spacer strips on base floor
- For exact power calculation, please ask for free advice from our design service.

Lifetime guarantee

MAGNUM Cable is a maintenance free floor heating system with a lifetime guarantee on electro technical operation of the heating cable and 2 years on the thermostat and floor sensor. Read the conditions and register at magnumheating.com

Supplementary heating

MAGNUM Cable is excellently suitable as supplementary heating. Take into account a minimum capacity of 150 watts per m² or ask for advice at our design service.

Primary heating

Primary heating is not always possible in every situation and depends on heat loss in individual circumstances. For advice on heating requirements please consult our technical support and design service Helpline.

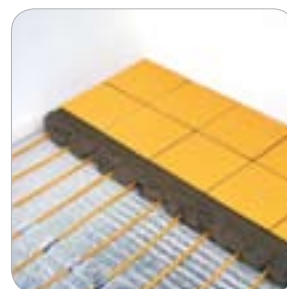
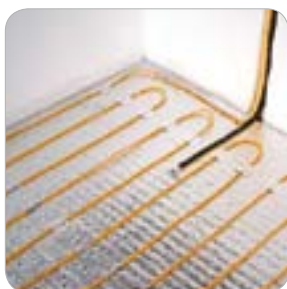
Examples of cable distances calculations

To calculate the right cable distances you must divide the free floor space in meters by the total power of the set. This result is multiplied by 17 (17=Watt per meter). The first two digits after the comma will give you the cable distance in centimeters.

Examples of supplementary heating:

500 Watt cable on 3m: (166W/m)
(3m: 500 Watt) x 17W/m = 0.102
Cable spaced at 10 cm intervals

1000 Watt cable on 7m: (142W/m)
(7m: 1000 Watt) x 17W/m = 0.119
Cable spaced between 11 and 12 cm.



Article#.	Power	Amperage	Ohm	Voltage	Cable Length
120300	300 Watt	1, 3	177	230 V	17, 6 m
120500	500 Watt	2, 2	109	230 V	29, 3 m
120700	700 Watt	3, 0	76	230 V	41, 0 m
121000	1000 Watt	4, 3	53	230 V	59, 0 m
121250	1250 Watt	5, 5	42	230 V	73, 4 m
121700	1700 Watt	7, 4	31	230 V	100, 0 m
122100	2100 Watt	9, 0	25	230 V	124, 0 m
122600	2600 Watt	11, 3	20	230 V	153, 0 m
122900	2900 Watt	12, 8	18	230 V	171, 0 m
123300	3300 Watt	14, 3	16	230 V	194, 0 m

***for a specific calculations please ask our design service**

Possible options:

Article #.	Description
720100	MAGNUM Stabiliser fibre (6 bags per m3 required)
720200	MAGNUM Aluminum tape (roll 22, 5 meter x 5 cm)
720310	MAGNUM Spacer strips (mounting strip: roll to 10 meter)
720315	MAGNUM Spacer strips (mounting strip: roll to 15 meter)
720400	MAGNUM frame strips (roll 10 meter x 5 cm)
720500	MAGNUM Isorol (3 mm) roll to 25 m ² (see chapter "Insulation")
720501	MAGNUM Isorol (3 mm) per piece to 1 m ² (see chapter "Insulation")
630112	MAGNUM Isoplate, 3 m ² , 10 mm (see chapter "Insulation")
630113	MAGNUM Isoplate, 4.8 m ² , 6 mm (see chapter "Insulation")

Possible options:

Frames in different colors for MAGNUM Intelligent-Control (see chapter "Thermostats")





MAGNUM[®] Cable Small

Electrical Floor heating cable for new build in sand cement screed.

Floor heating offers the most comfortable form of heating. Evenly distributed heat is radiated across the entire floor. The floor will reach an extremely pleasant temperature, and the general ambient temperature in the room will be very comfortable. Cold feet will become a thing of the past in a draught free environment.

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MAGNUM Cable electrical Floor heating cable offers even more than conventional water based under floor heating systems or even other electrical systems:

- Simple installation
- No water: so no risk of leaks

- No cutting work necessary
- Directly underneath pourable cement screed
- Primary or supplementary heating.
- Each room can be thermostatically controlled with its own thermostat.
- Energy efficiency guidance.
- Easy to use.
- Low purchase cost.
- Low consumption cost.
- 100% maintenance free.

*A heat loss calculation should be done to ascertain the amount of cable required for individual circumstances and needs. It is essential to use insulation in the substrate to attain a successful and energy efficient installation. Call our no obligation design service for further information.



**Lifetime guarantee on
MAGNUM Cable Cable!**
Click for conditions.



Applications

- Living rooms
- Bathrooms
- Kitchens
- Conservatories
- Foyers
- Office spaces
- Canteens
- Showrooms
- etc.

Sectors

- Industrial and Utility construction
- Renovations
- Distribution centres
- Hospitals
- Offices
- Stores
- Recreation

MAGNUM[®] Cable Small

Technical information

MAGNUM Cable is offered as a complete set.

- Heating cable
- Flexible conduit pipe for the floor sensor
- installation and user manual
- Full color box

Technical information MAGNUM Cable

- EMC-free 2-conductor cable
- Full containment by aluminum mantle
- Chrome/Nickel resistance wire
- XLPE insulation
- PVC protecting coat
- 12.5 Watt per meter capacity, 230 volt
- cable thickness: 7mm
- Produced and controlled to IEC 800 standards
- VDE approved
- CE standards within Europe
- ISO 9001 qualified

The cables are available in total capacities from 300 up to 3300 watt, enough for spaces between 2 and 30 square meters. The cable is a twin conductor with a unique splice connection which means it only needs to be connected at one end - there is no need for a return to the thermostat.

The MAGNUM Cable can be fixed to the substrate in several ways:

- Aluminum Tape on MAGNUM Isorol
 - Aluminum tape on dovetail sheets
 - Tie-wraps on reinforcement grid mesh
 - MAGNUM spacer strips on base floor
- For exact power calculation, please ask for free advice from our design service.

Lifetime guarantee

MAGNUM Cable is a maintenance free floor heating system with a lifetime guarantee on electro technical operation of the heating cable and 2 years on the thermostat and floor sensor. Read the conditions and register at magnumheating.com

Supplementary heating

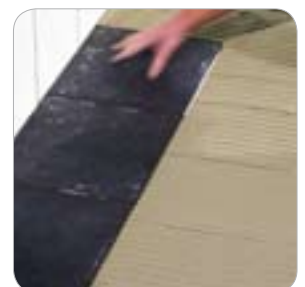
MAGNUM Cable is excellently suitable as supplementary heating. Take into account a minimum capacity of 150 watts per m² or ask for advice at our design service.

Primary heating

Primary heating is not always possible in every situation and depends on heat loss in individual circumstances. For advice on heating requirements please consult our technical support and design service Helpline.

Examples of cable distances calculations

To calculate the right cable distances you must divide the free floor space in meters by the total power of the set. This result is multiplied by 12.5 (12.5=Watt per meter). The first two digits after the comma will give you the cable distance in centimeters.



Article#.	Power	Voltage	Cable Length
130150	150 Watt	230V	12,07 m
130225	225 Watt	230V	17,66
130300	300 Watt	230V	23,77 m
130375	375 Watt	230V	29,87 m
130450	450 Watt	230V	35,97 m
130525	525 Watt	230V	41,67 m
130600	600 Watt	230V	47,67 m
130675	675 Watt	230V	53,77 m
130750	750 Watt	230V	59,87 m
130900	900 Watt	230V	71,57 m
131050	1050 Watt	230V	83,77 m
131200	1200 Watt	230V	95,47 m
131350	1350 Watt	230V	107,67 m
131500	1500 Watt	230V	119,37 m

*for a specific calculations please ask our design service





MAGNUM[®] Microfoil

Heating foil for wooden floors

The use of luxury timber flooring is becoming more popular and as a result of market demand, MAGNUM has developed a technically advanced system as a heating solution for real wood and laminate floors.

Most existing systems suitable for timber flooring require to be installed in a cement screed however MAGNUM Microfoil heating system can be placed directly underneath wooden, parquet or laminate floors. This very thin floor heating system (only 0.3 mm!) is controlled by a digital clock-thermostat with floor sensor, which ensures an equal heat distribution throughout the floor.

The floor temperature will be limited to a recommended maximum temperature of 28°C. MAGNUM Microfoil should be placed on 6mm thin polystyrene insulation plates, these insulation plates not only increase the thermal value of the floor but also reduce noise.

MAGNUM Microfoil is simple to install, can be cut to size and ensures a comfortable warm environment when using a timber floor.



Where and how to use:

- Directly under wooden, laminate or parquet flooring
- With the use of thermostat and floor sensor (temperature limited) in combination with 6mm polystyrene insulation plates and 0.2 mm moisture barrier.
- Can be cut to the required length
- Living room
- Bedroom
- Kitchen
- Conservatory
- Office

Sectors:

- Utility-building
- Offices
- Recreation

MAGNUM[®] Microfoil

Technical information

MAGNUM Microfoil is delivered as a complete set:

- MAGNUM Microfoil on the roll from 5, 10 till 15 m²
- Flexible sensor tube.
- PVC Tape and PP Tape
- Connection crimps
- Connection cables
- Clearly explained manual guide
- Free crimp tool

Can be ordered separately:

MAGNUM Isoplate, pressure insulation plates, pack of 6 m².

Only 0.3mm thin and 60mm wide, with a power of 80 or 120 Watt/m².

Maximum length: 18m x 0.60m can only be used for laminate and wooden floors up to 22mm.

Laminate and wooden floors should not be glued to the heating system. The foil must never be attached to the wood or laminate. Consult the manufacturer of your wooden flooring to ensure that their product is suitable for use with electrical floor heating.

The floor and underlay may not have a higher thermal resistance $R = 0.18 \text{ W/m}^2\text{K}$

May only be used as supplementary heating and in dry conditions, IP X1

Floor temperature should be limited to 28°C by the digital clock thermostat with floor sensor.

MAGNUM Microfoil should always be installed on top of the MAGNUM Isofoam (6 mm polystyrene insulation plates). MAGNUM can supply these polystyrene insulation plates. The MAGNUM Microfoil should also be covered by a 0.2mm moisture barrier. MAGNUM Microfoil must be connected to a RCD (max 30mA)

System approval:

According to the last European rules: SEMKO, CE approval (low voltage directive 73/23/EEC/ en 93/68/EEC/ EN 60335-2-96:2002+A1)

Guarantee:

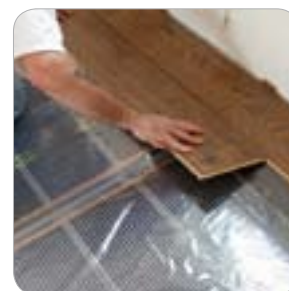
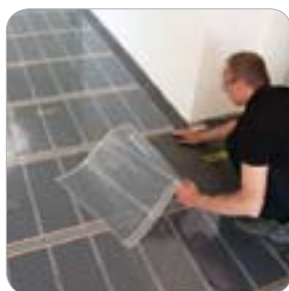
2 years guarantee on the thermostat. MAGNUM Microfoil should be connected to 230 V supply. Installation should be done by a qualified electrician in accordance with IEE & current building regulations.

Additional heating

MAGNUM Microfoil is used as additional heating. It provides a comfortable floor temperature.

Main heating

MAGNUM Microfoil is not suitable to be installed as a primary heating system.



Art.nr.	MAGNUM Microfoil set 120W/m ²
361005	5 m ² (0,6 x 8,4 m) MAGNUM Microfoil set 120W/m ² *
361010	10 m ² (0,6 x 16,8 m) MAGNUM Microfoil set 120W/m ² *
361015	15 m ² (0,6 x 25 m) MAGNUM Microfoil set 120W/m ² *
361110	10m ² (0,6 x 16,8mtr.) MAGNUM Microfoil 120Wm ² without thermostat
730300	6 m ² MAGNUM Isofoam, PS Isolation, 6 mm, 10 x 1,2 x 0,5 m (see chapter "Insulation")

* Set contains: MAGNUM Microfoil 100watt/m², flexible sensor tube, 2 x 15 meter. connection wire Black/Blue, Insulation tape, Connection crimps, Connection cables, Clearly explained manual guide, free crimp tool.

Art.nr.	MAGNUM Microfoil projects > 15m ² , 80/120W/m ² and options
360080	m ² MAGNUM Microfoil 80W/m ² , 0,6 x ...meter (per m ²)
360120	m ² MAGNUM Microfoil 120W/m ² , 0,6 x ...meter (per m ²)
720810	Microfoil crimp tool
730300	6m ² MAGNUM Isofoam, PS Isolation, 6mm
720807	Moisture barrier foil 12 m ² , 4 x 3 meter, 0,1 mm thin
720815	Microfoil connection set for 10m ² foil **

** Set contains: 2 x 15 meter. connection wire Black/Blue, Connection crimps, Insulation tape, PP tape, flexible sensor tube.





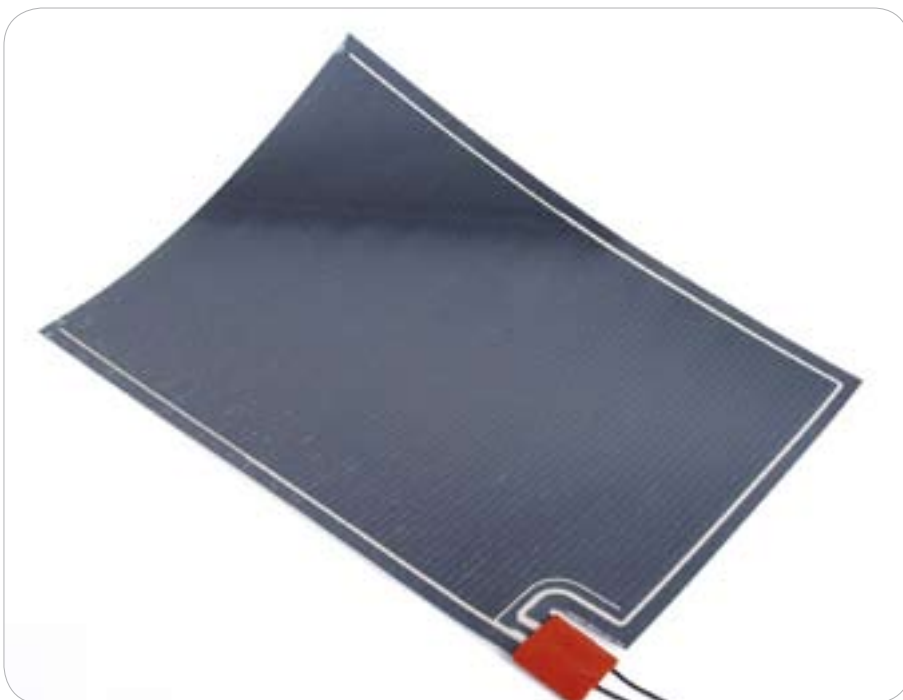
MAGNUM[®] Look

Mirror de-misting

MAGNUM Look is a double insulated foil and designed for use in wet areas such as bathrooms, shower rooms, etc. The panel is only 0.4mm thick. It is simply installed by peeling off the self-adhesive backing and sticking it directly onto the back of the mirror and connected by a qualified electrician.

MAGNUM Look is a mains voltage system, switched on by i.e. a light switch. It clears or prevents condensation on the mirror in just a few minutes. In that short amount of time the temperature of the mirror is raised to approx. 40°C thus preventing all condensation. The maximum temperature of the mirror is limited to approx. 50°C. Therefore, MAGNUM look mirror elements are safe to use!

MAGNUM look mirror de-misting panels are an absolutely safe and the simple answer to steamed-up mirrors.



Applications:

- Bathrooms
- Sauna's
- kitchens

Sectors:

- Private sector
- Hotels
- Recreation
- Sport facilities

MAGNUM[®] Look

Technical information

MAGNUM Look elements are delivered including:

- mirror heating foil with self-adhesive backing
- ±1 meter power cable
- Installation manual

Installation

-The mirror must not be damaged (i.e.: broken pieces on the edges, mirror cut by hand) to prevent tension differences in the mirror during heating up.
-For installation simply use the self-adhesive backing. It must be placed directly onto the back of the mirror.
ATTENTION: The adhesive backing is very sticky: installation on the glass is permanent.

Mounting the mirror on the wall:

-Corner brackets must have clearance to allow for expansion.
-Bear in mind that the connector of the heating foil is app. 4 mm thick. Keep enough space free around the back of the mirror, or cut out the required space on the wall.
-If the mirror is mounted on an outer wall, extra insulation (for example MAGNUM Isorol) between the mirror and the outer wall is recommended.

Mounting the mirror on the wall with glue.

-Only put glue on the part of the mirror which has no heating element attached. NEVER put glue on the heating element!.

Connection

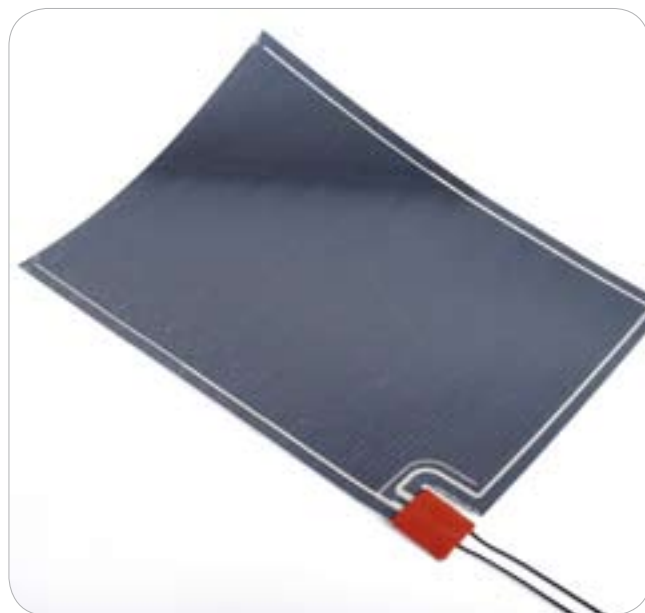
-The power cable is approx. 1 meter in length and may be lengthened or shortened.
-Mains voltage system; directly connected to a light switch. Use a (flexible) tube to guide the power cable from the mirror to a power point. .
-If more foils are installed, they MUST be run in parallel, NOT in series!
-Metal parts of the mirror should be connected to an earth.

Warranty

2 year warranty for electro technical function.

Product data

thickness	: 1 mm
Voltage	: 230 Volt
connection	: 2-wire
Norm	: IP-34, class 2
verification	: FIMKO, CE marking
temperature	: 40 à 50°C (depending on ambient temperature)



Art. nr..	Type	Power	Volt	Amp
310035	Element ø 35 cm. (rond)	50 watt	230	0.22
310029	Element 29 x 29 cm	27 watt	230	0.12
310050	Element 36 x 50 cm	50 watt	230	0.22
310058	Element 40 x 58 cm	65 watt	230	0.28
310075	Element 57 x 75 cm	100 watt	230	0.44





MAGNUM[®] Ideal frost protection

Frost free ribbon cable

In lots of situations, stopcocks, waterpipes, wastepipes and similar need protection from freezing. To prevent damage because of frost, MAGNUM offers a simple solution: with MAGNUM Ideal frost protection ribbon cable, frozen and burst water pipes are history! The MAGNUM Ideal program is specially designed to keep waterpipes, drains, stopcocks etc. frost free. Problems caused by freezing can easily be prevented by using an Ideal ribbon cable, ready to install and with automatic thermostatic function. Simply attach the cable to the water pipe, put extra insulation around it, and you'll have a safe, simple and cheap system that keeps the water flowing!

MAGNUM Ideal: easy, economical and safe: ideal!



Sectors:

- Houses, utility and industry
- Recreation
- Pleasure craft, ships and yachts
- Houseboats
- Agriculture, glasshouse construction
- Animal husbandry
- Offshore

Applications:

- Internal and external pipe work
- Outdoor stopcocks and waste pipes
- Drainpipes and gutters
- Solar panel pipe work

MAGNUM[®] Ideal frost protection

Technical information

MAGNUM Ideal ready to connect frost-free ribbon cable with bimetal limiter. The ribbon cable is powered up at temperatures below +5°C and switches off automatically if the pipeline temperature rises above +5°C. Ideal ribbon cable is available in lengths from 1 to 48 meters and is ready to use with a 2-meter power cable and an earthed plug. When the thermostat is in operation, MAGNUM Ideal consumes 10 watts per linear meter. MAGNUM Ideal is extremely easy to fit to pipe work using aluminum tape or plastic quick fasteners (Ty- Wraps). It is recommended to use MAGNUM Ideal ribbon cable in conjunction with (polyethylene) pipework insulation of minimal wall thickness of 10 mm. This provides optimal protection and insulation, ensuring energy efficient operation. Power: 10 watt / meter.

MAGNUM Ideal is delivered as standard including:

- Ribbon cable, ready to connect with 2 meter connection cable and bimetal limiter.
- Installation manual
- Tape



Pipe diameter (max.)	:	15mm	20mm	25mm	30mm	40mm	50mm	100mm
Installation method	:			Protection of water pipe:				
Linear (along the pipe)	:	-30°C	-30°C	-25°C	-20°C	-15°C	-10°C	- 5°C
10 rolls per mtr.	:	--	--	-30°C	-30°C	-25°C	-25°C	-20°C
20 rolls per mtr.	:	--	--	--	--	-30°C	-30°C	-30°C
Calculate cable length	:			length of pipe x				
10 rolls per mtr. (x)	:	1,25	1,50	1,75	2	2,25	2,5	4
20 rolls per mtr. (x)	:	2	2,25	2,50	2,75	3,25	4	8

Art. nr.	Length	Power	Volt
155001	1 meter	10 Watt	230V
155002	2 meter	20 Watt	230V
155004	4 meter	40 Watt	230V
155006	6 meter	60 Watt	230V
155008	8 meter	80 Watt	230V
155010	10 meter	100 Watt	230V
155014	14 meter	140 Watt	230V
155018	18 meter	180 Watt	230V
155022	22 meter	220 Watt	230V
155026	26 meter	260 Watt	230V
155030	30 meter	300 Watt	230V
155034	34 meter	340 Watt	230V
155040	40 meter	400 Watt	230V
155045	45 meter	450 Watt	230V
155048	48 meter	480 Watt	230V





MAGNUM® Outdoor Cable

Frost free systems

MAGNUM Outdoor systems offer safety and reliability with a low running cost and no maintenance. Safety prevention and continuity are key concepts that warrant the Installation of frost free fittings. Suitable areas for this type of system are entrance and exit slopes of distribution centres, parking areas, hospitals, fire stations, office buildings or any area that during winter time could create a hazard or disruption.

The extensive concept of heat cables, sensors and regulating units create a compliant reaction to extreme weather in the variable European climates. Great temperature shifts and unexpected snow or hail: with a MAGNUM Outdoor system there is always safe and certain access!

**Sectors:**

- Industrial
- Logistic centers
- Department of public works
- Offices
- Utility buildings
- Domestic driveways

Applications:

- Approach and exit slopes
- Entrances
- Helicopter pads
- Platforms
- Parking garages

MAGNUM[®] Outdoor Cable

Technical information

MAGNUM Outdoor is an advanced system of heating cables, sensor units that measures outdoor temperatures with humidity and a custom made control case. The sensor unit is equipped with a thermal element that melts snow or ice. The system is therefore only activated when outdoor temperature drops below the adjusted value (e.g. +3°C) and the sensor unit will simultaneously measure the humidity. The feeder is connected by electrical welding to the resistance wire. The copper reinforced casing protects the resistance wire from damage and guards the cable against electromagnetic radiation and in addition will not disturb mobile phones, remote controlled garage doors and portals, safety installations e.g. the cable is equipped with a XLPE outer casing and is resistant to chemical reactions.

Complete systems

MAGNUM Outdoor Installations are illustrated and designed to order. A completely waterproof control case completes the system.

Technical specification outdoor frost protection cables:

- 1900 and 3400 watt
- Connection voltage: 230 V/50Hz
- IEC 800 en CE standard
- ISO 9001 produced.
- 10 year guarantee

Technical specification control cases:

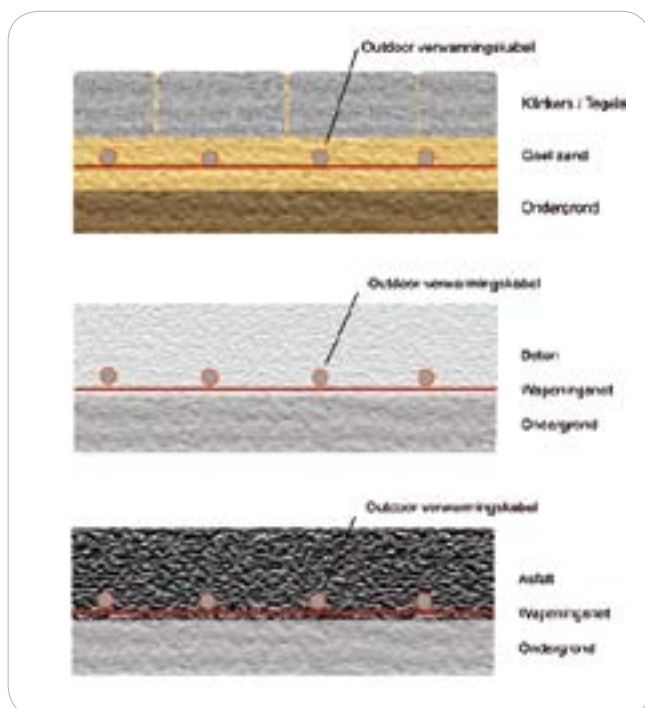
- Waterproof (IP-66)

Complete and custom made including:

- Thermostat DIN Rail 0/+5°C 24V-10 Amp.
- Transformer 24V for thermostat and sensor
- relays 230 / 380V
- Ground (floor) sensor

Warranty

10 year warranty for electro technical function.



Art. nr.	Type	Power	Amp.	Ohm	Voltage	Length
125019	Outdoor cable	1900 Watt (28Watt/m)	8,3	28	230V	68 m + 10 m connection cable
125034	Outdoor cable	3400 Watt (28Watt/m)	14,7	16	230V	121 m + 10 m connection cable

MAGNUM Outdoor options (see chapter “thermostats”)

Art. nr.	Type
893550	ETO2-4550 Din Rail temperature/moisture unit 3x16A-230Volt
890065	ETOG-55-UA Sensor unit ground temperature/moisture for. ETO2-4550
900055	ETOR-55 moisture – roof gutter sensor with. 10mtr connection cable
891551	ETI-1551 Din Rail thermostat -10/+50°C max. 10A-230Volt
901441	ETF-744/99 ambient/air temperature sensor for ETI-1551 thermostat
860199	ETF-144 floor sensor

MAGNUM outdoor control case*:

Art. Nr.	Type	H x W x D in cm
900004	Control case <3,6 kW	40 x 30 x 21
900010	Control case <10 kW	50 x 40 x 21
900020	Control case <20 kW	50 x 40 x 21
900030	Control case <30 kW	72 x 51 x 25
900040	Control case <40 kW	72 x 51 x 25
900050	Control case <50 kW	85 x 65 x 30

Higher powers will be calculated on request.

* delivered ready to install (IP-66), including: Thermostat DIN Rail 0/+5°C 24V-10 Amp., Transformer 24V for thermostat and sensor, relays 230 / 380V, 2 Ground (floor) sensors





MAGNUM[®] Outdoor Mat

Frost protection system

Safety, prevention and continuity are the key words that justify the investment for installing a frost protection system. Also for small surfaces or pedestrian areas that need to be kept frost free and safe, MAGNUM Outdoor offers safety and reliability at a low cost. This easy to install outdoor frost protection system works fast in cold and icy conditions. Safety, prevention and continuity are key concepts that warrant the installation of frost free fittings. Entrance and exit slopes of distribution centers, parking garages, hospitals, fire stations, office buildings etc. Anywhere where winter time could create slip hazards, the MAGNUM Outdoor concept offers safety and reliability with a minimal investment or user maintenance cost. The extensive concept of heat cables, sensors and regulating units create a compliant reaction to extreme weather in the variable European climates. Great temperature shifts and unexpected snow or hail: with a MAGNUM Outdoor there is always safe and certain access!



Sectors:

- Industrial
- Logistic centers
- Department of public works
- Offices
- Utility buildings
- Domestic driveways

Applications:

- Approach and exit slopes
- Entrances
- Helicopter pads
- Platforms
- Parking garages

MAGNUM® Outdoor Mat

Technical information

MAGNUM Outdoor mat is a highly sophisticated system of heating mats, 2 sensor units that detect humidity in combination with ambient temperature, and a custom made control case.

The sensor units have a heat element that melts snow or ice. As a result the system will only be activated if the ambient temperature is lower than the installed value (i.e.. +3°C) and if the sensor unit detects humidity at the same time. This guarantees a very energy efficient control.

The feeder is connected by electrical welding to the resistance wire. The copper reinforced casing protects the resistance wire from damage and guards the cable against electromagnetic radiation and in addition will not disturb mobile phones, remote controlled garage doors and portals, safety installations e.g. the cable is equipped with a XLPE outer casing and is resistant to chemical reactions.

Complete systems

MAGNUM Outdoor Installations are illustrated and designed to order. A completely waterproof control case completes the system.

Warranty

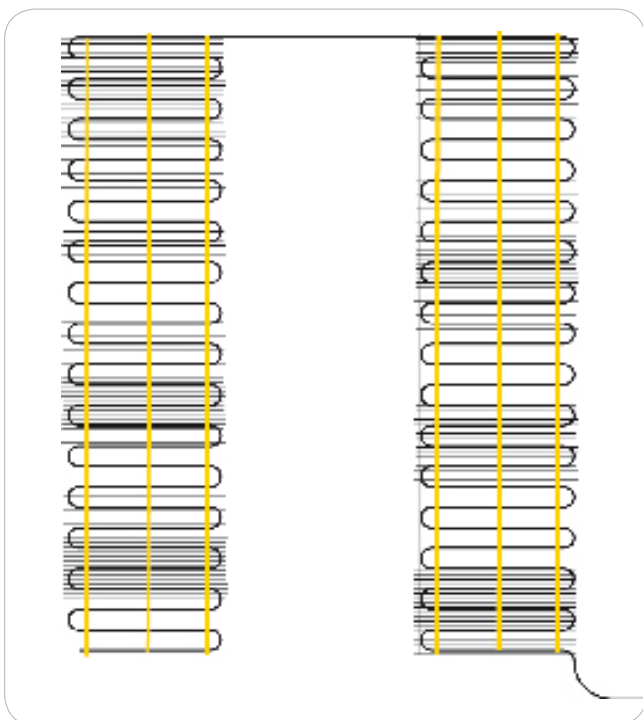
10 year warranty for electro technical function.

Technical specifications

- mats available in 2,5m², 5m² and 10m².
- Connection voltage: 230 V/50Hz
- IEC 800 en CE
- ISO 9001 produced
- 10 years guarantee
- 280 Watt/m²

Control case waterproof(IP-66) according to NEN 1010, Complete and custom made including:

- Thermostat DIN Rail 0/+5°C 24V-10 Amp.
- Transformer 24V for thermostat and sensor
- relays 230 / 380V
- 2 Ground (floor) sensors



Art. nr.	Type	Measurements	Power	Amp.	Ohm	Volt
126002	Outdoor mat 2,5 m ²	0.5 x 5 m	700 watt	3,0 A	75	230V
126005	Outdoor mat 5,0 m ²	0.5 x 10 m	1400 watt	6,0 A	38	230V
126010	Outdoor mat 10,0 m ²	0.5 x 20 m	2800 watt	12,2 A	19	230V

MAGNUM Outdoor options (see chapter “thermostats”)

Art. nr.	Type
893550	ETO2-4550 Din Rail temperature/moisture unit 3x16A-230Volt
890065	ETOG-55-UA Sensor unit ground temperature/moisture for. ETO2-4550
900055	ETOR-55 moisture – roof gutter sensor with. 10mtr connection cable
891551	ETI-1551 Din Rail thermostat -10/+50°C max. 10A-230Volt
901441	ETF-744/99 ambient/air temperature sensor for ETI-1551 thermostat
860199	ETF-144 floor sensor

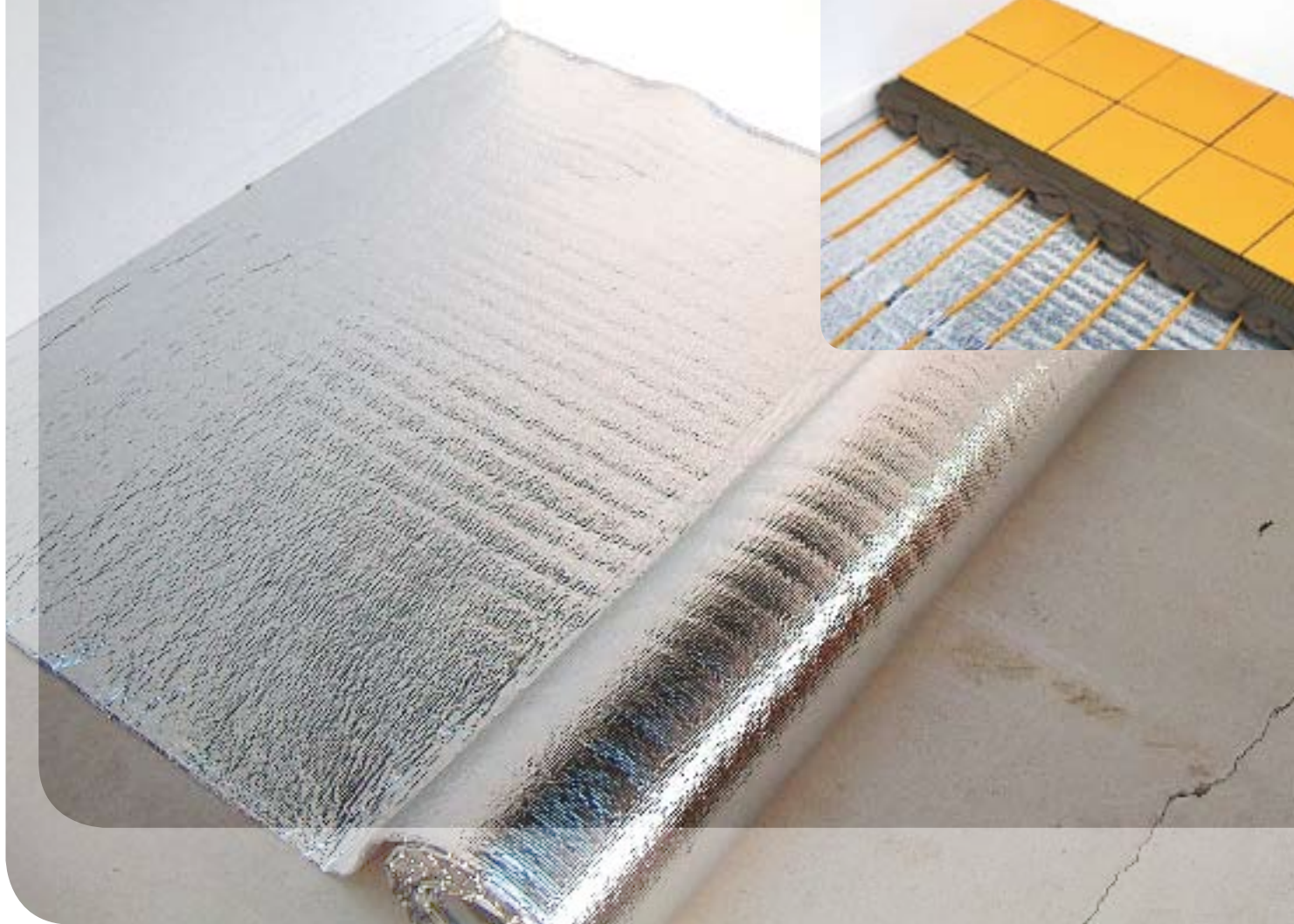
MAGNUM outdoor control case*:

Art. Nr..	Type	H x W x D in cm
900004	Control case <3,6 kW	40 x 30 x 21
900010	Control case <10 kW	50 x 40 x 21
900020	Control case <20 kW	50 x 40 x 21
900030	Control case <30 kW	72 x 51 x 25
900040	Control case <40 kW	72 x 51 x 25
900050	Control case <50 kW	85 x 65 x 30

Higher powers will be calculated on request.

* delivered ready to install (IP-66), including: Thermostat DIN Rail 0/+5°C 24V-10 Amp., Transformer 24V for thermostat and sensor, relays 230 / 380V, 2 Ground (floor) sensors





MAGNUM[®] Insulation

Insulation plates and foils, suitable for under floor heating

MAGNUM offers a wide range of under floor heating systems, suitable for concrete (MAGNUM Cable), directly in tile adhesive (MAGNUM Mat) or even directly under wood, parquet or laminate (MAGNUM Microfoil). The better the floor insulation is, the better the result with under floor heating system will be, with greater energy efficiency. MAGNUM therefore offers a wide range of insulation materials specifically designed for diverse under floor heating systems with their own construction specifications.

MAGNUM Isorol

Isorol is a 3 mm thick insulation made of polystyrene with an aluminum top layer. This can be used in combination with the MAGNUM Cable heating cable. Isorol can be attached to the concrete sub Floor, with the cable rolled on top of it. Isorol works as a radiant sheet and increases the capacity and reaction time of the floor heating. Isorol is not pressure proof. Using MAGNUM Isorol will create a floating floor; therefore the minimum thickness of the top floor must be at

least 4 cm to guarantee the right compressive strength of the floor. .

MAGNUM Isoplate

Isoplate is a pressure proof insulation plate that is made of polystyrene hard foam with, on both sides, a cement coating. Available in 6 or 10 mm thicknesses. Very suitable in combination with MAGNUM Mat. Since the insulation plates are pressure proof they can also be installed if there is a small height allowance available for the floor construction. The Mat and tiles can be glued directly on top of it.

MAGNUM Isofoam

Isofoam is a 6 mm thick polystyrene insulation which is used in combination with MAGNUM Microfoil. This foam does not only have a warmth insulating capacity but it also reduces noise. It is ideal for wooden floors in flats or apartments!



Applications:

- Buildings: bathrooms, toilet,
- On cement based and timber floors
- Directly under tiled floors
- For both big and small spaces
- For those situations that require extra insulation, but don't have enough height available.

MAGNUM[®] Insulation

Technical information

MAGNUM Isorol

MAGNUM Isorol is an expanded polystyrene foam with one side a metalized PET-film 12μ. For use as under layer for MAGNUM Cable (NB an allowance for enough construction strength with floating floors must be calculated). The floor must be free from dust and grease, smooth and dry. Discrepancies of more than 2 mm must be resolved. Place the foil with the PET-film on top. Use the special aluminum tape to seal the gaps between the foils. This tape can be ordered separately.



Specifications:

- moisture and mold proof
- excellent reflection and moisture insulating capacities (due to metalized PET-film).
- easy to install and cut.
- very high mechanical strength
- 100% CFC free material

Technical specifications

density: min 15kg / m³
EPS-foam: fire decelerating quality
Temperature resistance: - 30 to + 70 °C
Insulation value: 0,036 W/mK
Pressure proof short term: with 10% transformation 60kPa

thermal form stability

- short term: 100°C
- long term at - 5000 Pa: 85°C / at - 20000 Pa: 75-80°C

MAGNUM Isoplate (pressure proof insulation plates)

MAGNUM Isoplate offers the possibility for extra Floor insulation in places where there is only limited floor height available. The pressure proof specifications of the insulation plates make it possible to install an electrical heating system (MAGNUM Mat) directly on top of it. MAGNUM Isoplate increases the insulating capacity of the floor resulting in a higher capacity and shorter reaction time of the heating system. The insulating value means higher energy efficiency and a lower electricity bill. The polystyrene hard foam has a special cement layer on both sides,

constructed in a glass fiber net.

Specifications:

- moisture and mold proof
- fire proof
- very low moisture absorption
- suitable for MAGNUM Mat

Technical specifications

Fire proof: DIN 4102 material class B1
waterproof: water absorption <0, 5% after 28 days under water, according DIN53 421
temperature proof: - 30 tot + 70 °C
insulation value: 0,035 W/mK according DIN 4108
pressure proof: > 0, 20 N/mm according DIN 52 615



MAGNUM Isofoam

MAGNUM Isofoam is a 6 mm thick floor insulation made of 100% recycled materials. The structure of the Isofoam is made from small closed cells that have an excellent insulating value. The special structure makes sure that no heat is radiated downwards, so all the heat generated from the Microfoil will be sent to the surface

Specifications:

- light weight
- Optimum noise reduction
- excellent heat insulation
- equalizes discrepancies in the floor surface
- easy to install and cut to size.
- only 6 mm thin
- suitable for MAGNUM Microfoil

Technical specifications

waterproof: 0, 06%
temperature proof: - 30 tot + 70 °C
noise insulation: above Floor - 5, 6 dB
under floor - 21 dB
pressure proof: 6 t /m
insulation value: 0, 0279 W/mK



MAGNUM Isorol

Artikelnr.	Unit	Description
720500	Roll 25 m ²	MAGNUM Isorol (3 mm) 25 m ²
720501	1 m ²	MAGNUM Isorol (3 mm) 1 m ²

MAGNUM Isoplate

Artikelnr.	Unit	Description
630112	3 m ²	10 mm MAGNUM Isoplate, polystyrene hard foam, 5 plates 60 cm x 100 cm
630113	4.8 m ²	6 mm MAGNUM Isoplate, polystyrene hard foam, 8 plates 60 cm x 100 cm

MAGNUM Isofoam

Artikelnr.	Unit	Description
730300	set	6m ² MAGNUM Isofoam, PS insulation, 6mm, 10 plates 120 cm x 50 cm





MAGNUM® Thermostats

Control devices, sensors and additional materials

MAGNUM offers a wide range of (under) floor heating systems with a wide variety of uses and floor constructions. In combination with proper insulation a good (thermostatic) control, the heating system will add to the overall ambient comfort and will reduce electricity costs.

The MAGNUM Intelligent-control clock thermostat is one that can do it all: both suitable for all floor heating systems as for ceiling and wall heaters. Standard equipped with a floor sensor for an accurate control of the required floor temperature (with limiting function in combination with wooden floors) as well as an internal air temperature sensor to control the floor heating as a main heating system. Very user friendly with an easy to use step by step menu with help function, in several languages. Thanks to the intelligence function this high tech thermostat provides you with a very comfortable living and working ambience, at the lowest possible costs.

Some situations require a less sophisticated control. In these circumstances, a simple on / off thermostat is the solution. Especially in industrial use or when continuous heating is required. For these situations, MAGNUM has developed the S-control: a very aesthetically pleasing on / off thermostat with temperature control where simplicity is the key.

Besides the digital clock thermostat and easy and simple on/ off thermostat MAGNUM offers a wide range of control equipment, such as custom made control cases for outdoor frost protection, pipe sensors etc.



Sectors:

- Production
- Utility buildings and industry
- Renovation
- Logistic centers
- Hospitals
- Offices
- Stores
- Recreation

MAGNUM[®] Intelligent-Control

Advanced digital clock thermostat

MAGNUM has the perfect solution for temperature regulation: The MAGNUM Intelligent-Control thermostat. This stylish and sophisticated digital built in clock thermostat has been specially designed for our electrical heating systems. The MAGNUM Intelligent-Control thermostat is even easier to program and to use. The thermostat can be programmed in 6 languages (English, Dutch, French, German, Spanish and Portuguese). Step by step instructions are provided for easy programming.

The thermostat also has the new on screen help facility where after 10 seconds the help function will appear giving a full explanation of each setting. The MAGNUM Intelligent-control also has a wooden floor function which limits the floor to 28 °C. This makes the MAGNUM Intelligent-Control the perfect and safe solution to control our new MAGNUM Microfoil for warming wooden floors.



The MAGNUM Intelligent-Control has the following new features:

- Slow start up function
- Wooden floor function (temperature limited at 28 °C)
- Built in on screen help function
- Back up function
- Summer and Winter time will automatically adjust
- Network ready
- 2 frames supplied: modern edged or classic bend.
- 3 new frame colours (optional extra): Pergamon, Silver, Graphite Black.
- Intelligent & self learning
- Very easy to use
- Multi program function (2 on/off periods per day)
- Can be programmed in 6 languages
- On screen help function
- Temperature range: +5 / +40 degrees Celsius
- Frame: IP 21
- Approvals: VDE / FI / CE
- Warranty: 2 years



Pergamon








Silver



Graphite Black

MAGNUM® Thermostats

Art.nr.	Type	
825500	MAGNUM Intelligent-control advanced digital clock thermostat Including floor sensor and built in air temperature sensor Wooden floor function (temperature limited at 28 degrees Celsius) Voltage: 230 Volt - 50/60 Hz, Max. power: 16 A / 230 V Back up function Summer and Winter time will automatically adjust Network ready Temperature range: +5 / +40 degrees Celsius Frame: IP 21 Approvals: VDE / FI / CE	
826000	MAGNUM FHT digital clockthermostat incl. floorsensor With floor and internal room temperature sensor Voltage: 230 Volt - 50/60 Hz, Max. power: 16 A / 230 V Temperature range: +5/+40°C Programmable 2 periods per day According to standard DIN sizes. Color: Polar white (RAL 9010), Frame: IP 21 Approvals: FI/ CE/ CCA	
827000	MAGNUM S-Control On-off thermostat with temperature control With floor and internal room temperature sensor Voltage: 230 Volt - 50/60 Hz, Max. power: 16 A / 230 V Temperature range: +5/+40°C According to standard DIN sizes. Color: Polar white (RAL 9010), Approvals: FI/ CE/ CCA	
860199	Floorsensor Length: 2,50 meter	
863130 863140 863150	Silver frame set for MAGNUM Intelligent-Control Graphite black frame set for MAGNUM Intelligent-Control Pergamon / Ral 1013 frame set for MAGNUM Intelligent-Control	
863010	Wall mounting frame MAGNUM Intelligent-Control (Only round frame) FHT & S-Control, Color: RAL9010 / polar white	